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ABSTRACT

Presented is the final report of a needs assessment survey conducted to determine the number of secondary students in Montgomery County (Maryland) who are potential candidates for learning disabilities programs. Following an introduction, a section on procedures outlines project limitations, sample selection, and screening criteria. Reported among findings are the following: during the 1974-75 school year there were 80 learning disabilities classes operational in Montgomery County; 23% of the population surveyed were learning disabled candidates; and in no instance did the percentage of learning disabled students enrolled in special programs at either the elementary or secondary level exceed 3%. Listed among conclusions is that the primary area of academic difficulty for underachieving students was likely to be reading. Statistical data on student characteristics is presented in table form, and a listing of tests used and testing scores are appended. (SBH)

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NEEDS ASSESSMENT SURVEY: FINAL REPORT

Title III: Curricular Development for Secondary Learning Disabilities

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Introduction

This Needs Assessment Survey was undertaken as part of a Title III project, Curricular Development for Secondary Learning Disabilities, which was begun in Montgomery County in the late summer of 1974. While the project has many and varied goals, its overriding purpose is the development of exemplary programs for secondary learning disabled students. Since the incidence of learning disabilities among secondary students is not known at the present time, it quickly became apparent that the first step in the process of program development would have to be the determination of the actual number of junior and senior high school students within the county needing specialized learning disabilities programs. As a result of studies (Myklebust, 1969) and surveys (Mackie, 1969, United States Office of Education, 1968) estimates of the occurrence of learning disabilities ranging from 1 to 30 percent among primary aged children, have been suggested. In general, professional and legislative consensus has established a maximum prevalence figure of 3 percent--for young children.

It would be a mistake, however, to assume that the same prevalence figure can be applied to older students as well. There are a number of reasons why the blanket application of the 3 percent standard should be avoided. First, elementary level learning disabilities programs are, more often than not, envisioned as short term programs, i.e., elementary teachers strive to reintegrate youngsters into the mainstream of regular education after a period of remedial and/or compensatory training. Many children do, in fact, return to regular class programs on a full-time basis, thus reducing the size of the elementary learning disabled population. Of course, not all children will be able to overcome their handicaps and achieve reintegration; a portion, hopefully a minority, of primary learning disabled youngsters will remain in special education programs. As their learning problems persist, so will their need for continuing educational support, frequently into and throughout their secondary school years.

Second, there are undoubtedly many students in our junior and senior high schools who would meet the criteria for placement in learning disabilities classes if such programs were available. Many of these older disabled students have a long history of academic failure and related school problems. Unfortunately, help was not available for them during their early school years; either because learning disabled classes had not yet been established or they were already too old for classes being started for the very young. And finally, many individuals diagnosed as brain injured/learning disabled are currently attending private schools for want of programs within their home school districts. The current trend toward returning private school enrollees to their communities is likely to bring many of these students back to the public schools, and we will have to be prepared for them. In sum, students attending private schools, secondary students with persistent learning deficiencies, and identified learning disabled students moving up from

elementary programs into secondary programs are the sources from which a population of secondary learning disabled students will emerge. While we know who they are, at this time we cannot even hazard a guess as to how many there are. Therefore, this Needs Assessment Survey was undertaken to determine the size of the secondary learning disabled population in Montgomery County, as a basis for program planning and development.

Procedures

In order to clearly communicate the nature, intent, and scope of this Needs Assessment Survey, we have made a concerted effort to define our purpose and present our procedure in detail in the following section of the report.

Limitations

The primary purpose of the Needs Assessment Survey was to determine the number of secondary students who were potential candidates for learning disabilities programs. To accomplish this goal, a direct screening of students, as opposed to a polling of teachers or counselors, was the strategy of choice. Since the number of staff positions and the amount of time that could be devoted to the survey were limited, some limitations were necessary in order to scale the needs assessment down to manageable proportions. It was decided that:

1. the needs assessment screening would not be attempted for all secondary students, but rather would be restricted to a pre-selected student sample and the results projected to the county school population at large,

2. lacking the staff to initiate a testing program, the screening would rely on the data which was available in current school records, and

3. the student sample would be comprised solely of sixth graders.

The following factors underlie the decision to limit screening to a sixth grade sample:

1. We anticipated that teacher observations and comments would be an important source of information. We felt that elementary teachers were more likely to know their students well since the youngsters are in their charge the better part of the school day, whereas secondary teachers must interact with many more children and can see each one for only a small portion of the school day.

2. Testing data would be readily available since all districts conduct testing programs at or near the end of the elementary school program.

3. Learning disabilities manifested in sixth grade school performance are very likely to persist into the higher grades.

The screening of sixth grade students made it possible to project a rough estimate of the number of learning disabled adolescents moving up to secondary programs, if not the actual number of disabled junior and senior high school students. The screening procedure also provided considerable information on the nature and severity of the learning problems among the students identified as learning disability candidates.

Sample Selection

The original projection called for the selection of a sample population of approximately 10 percent of all sixth grade public school classes in Montgomery County. Three hundred and forty three and one-half sixth grade classes were operative in Montgomery County public schools during the 1974-75 school year. While each district in the county was to be represented in the sample, the exact number of classes chosen from each varied according to the size of the school population. The exact number of classes to be drawn from each district was determined in the following manner:

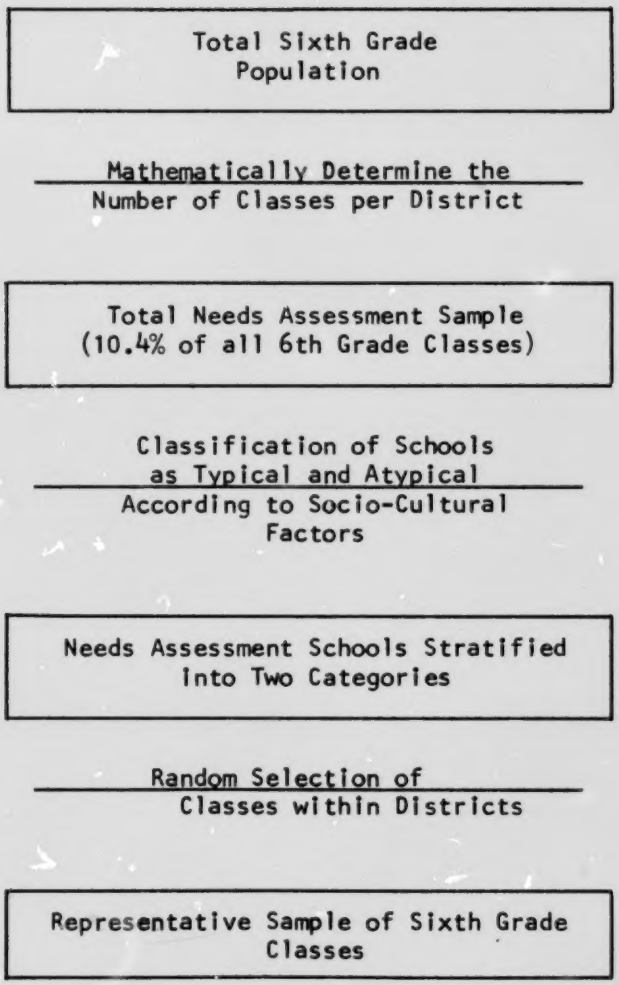
1. The number of sixth grade classes per district divided by the total number of sixth grade classes in operation across the county yields a percentage figure for each district. For example, Abington has 20.5 sixth grade classes. 20.5 divided by 343 yielded 6 percent.

2. The percentage per district times 34 (10 percent sample size) yielded the number of classes to be drawn from each district. Referring to Abington district once again, 6 percent of 34 classes equals 2.04 classes. Therefore, two Abington classes would be included in the final needs assessment sample.

3. In instances where the calculations yielded a number (of classes) less than one, the number was rounded up to one; the minimal district representation was one class.

By following this three step procedure, a total of 36 sample classes were apportioned among the 21 districts of Montgomery County, and this number represents 10.4 percent of the total number of public school sixth grade classes operating during the 1974-75 school year. A numerical presentation of the needs assessment sample class selection is presented in Table 1.

Figure 1


Total Sixth Grade Population
Mathematically Determine the Number of Classes per District
Total Needs Assessment Sample (10.4% of all 6th Grade Classes)
Classification of Schools as Typical and Atypical According to Socio-Cultural Factors
Needs Assessment Schools Stratified into Two Categories
Random Selection of Classes within Districts
Representative Sample of Sixth Grade Classes

After having determined the number of classes to be drawn from each district, the actual selection of the individual classes were preceded by a categorization of district elementary schools (on occasion intermediate and middle schools were included if they housed sixth grade classes) as "typical" or "atypical." Discussions with local school representatives revealed that there are significant differences in the composition of school populations which reflect strong socio-economic and/or cultural community differences. As one might expect, heterogeneity is greater in the eastern-most and more densely populated districts rather than in the central and western districts. We felt that the survey sample should reflect, rather than obscure, these differences and, therefore, that sample classes should not be drawn only from "average" or "typical" schools. By identifying atypical schools, we were able to select a portion of their classes for inclusion in the needs assessment sample. The class sample selection process is illustrated in Figure 1.

Screening Criteria

The learning disabled are those students who,

1. have average or better intellectual ability,
2. exhibit a significant discrepancy between expectancy and achievement in academic subjects,
3. have disorders of one or more basic psychological processes which may result in difficulty in the ability to listen, think, speak, read, write, spell, or do mathematical calculations,
4. are not mentally retarded, emotionally disturbed, or environmentally disadvantaged, and
5. are free of severe sensory deficits or motor impairments.

The five criteria are taken from Standards for the Operation of Special Education Programs and Services, published by the Pennsylvania Department of Education. Children in the needs assessment sample who met all of these standards were designated as possible learning disability candidates.

The first criterion stipulates average or better intellectual ability. A cutoff of 90 was applied. Children whose full scale I.Q. score fell between 80 and 90, while in the normal range by state standards, were considered to be slow learners not learning disabled

unless there was some evidence to suggest that the I.Q. score might be an underestimate of the child's true ability.

The second criterion stipulates a significant lag in school achievement. As a general rule of thumb, one or more years of academic deficiency would be considered significant for an elementary child, two or more years of academic deficiency would be significant for a secondary student. The second criterion was applied to the test data in the following way:

1. All children in the sample whose achievement test scores fell one or more years below expected grade level performance in math and/or reading were identified. Expected grade level performance was the date of testing converted to an instructional year equivalent. For example, if testing data had been 1/75 for a group of sixth graders, it would be converted to a 6.5 grade performance expectancy. For this group of youngsters, an achievement score of 5.5 or less in math and/or reading would be considered a significant lag.

2. Having identified students with a significant lag in achievement, we then looked at the I.Q. score. If the I.Q. score was 90+, the child was considered to be a learning disabilities candidate. For those youngsters whose score fell below 90, we examined the degree of scatter among the achievement subtest scores. We were specifically looking for information to counter indicate a classification of slow learner or retarded for students with measured I.Q.s below 90. If there was a range of two or more years among the subtest scores with the highest subtest score reaching grade expectancy, the child was designated as a learning disabilities candidate despite the lowered I.Q. score.

The general patterns of achievement and ability which emerged were:

1. Achievement lag plus lowered I.Q. plus flat profile of individual subtest scores = not a learning disabilities candidate.

2. Achievement lag plus lowered I.Q. plus significant subtest scatter = learning disabilities candidate.

3. Achievement lag plus average I.Q. = learning disabilities candidate.

As a result of the application of criteria one and two on the available test data, we were able to isolate a subgroup of underachieving youngsters within the student sample. It must be stressed, however, that while every learning disabled student is by definition an underachiever, every underachiever is not necessarily learning disabled. It is necessary to distinguish between learning problems which originate from basic process dysfunctions within the child and those learning problems which may result from factors external to the child, e.g., an impoverished or disrupted home life, temporary physical illness, emotional trauma, etc. The former are appropriately termed learning disabilities; the latter are not. The third criterion which stipulates some indication of central processing dysfunction as manifested in problems of thinking, conceptualization, language, perception, etc., will be the decisive factor.

In order to determine whether or not there is some difficulty of central processing dysfunctions contributing to each child's learning difficulties, direct diagnostic testing of the children would be required. It was not within the bounds of the project to evaluate children in this manner. We had hoped to tentatively identify cases of learning disability through close inspection of pupil records and work samples and teacher interviews. We had requested that the teachers of the needs assessment sample classes complete a Pupil Rating Scale for any child in their class designated a learning disability candidate. The Pupil Rating Scale, developed by H. R. Myklebust, is specifically designed to identify learning disabled youngsters in the elementary grades. The instrument is comprised of 24 items to be rated on a scale of one to five. However, as the instrument was normed on 1st, 2nd, 3rd, and 4th grade children and the needs assessment sample is solely comprised of 6th grade children, the rating scale was only intended to be used as a structured observation form, not a formal test. Completed Pupil Rating Scales were secured for most, but not all, of the children in the needs assessment sample. While we are very sure that many of these children are indeed learning disabled without additional testing, we cannot make the definitive distinction between the truly handicapped and other educationally backward students. This prerogative is left to the discretion of each school district.

The fourth criterion categorically excludes the retarded, disadvantaged, and disturbed from placement in learning disabilities programs. While children in these categories may have characteristics in common with the learning disabled, their problems are the result of the primary disability, i.e., retardation, emotionally disturbed, deprivation, and not a learning disability per se.

The fifth criterion is intended to exclude youngsters whose sensory or physical limitations are so severe that it would hinder the child's ability to function in a regular classroom setting.

Current Learning Disabilities Programs in Montgomery County

The learning disabled candidates identified via the screening process are only one segment of the total secondary learning disabled population. Learning disabled students of secondary school age who are currently in special classes must be added. In order to accumulate this information on current programs and private school placements, each district contact person was asked to respond to the following questions:

1. How many elementary learning disabilities programs are operational in your district during the current school year? How many children are enrolled?

2. How many secondary learning disabilities classes are operational in your school district during the current school year? How many students are enrolled?

3. How many students diagnosed as brain injured or learning disabled are attending private schools?

The information derived is presented in Table II. The tables include for each district, the number of elementary level learning disabilities programs and number of students enrolled, the number of secondary learning disabilities programs and number of students enrolled, and the number of elementary and secondary learning disabled students enrolled in private schools. Both I.U. and district operated classes are entered in the table as these students would not have been included in the study sample.

During the 1974-75 school year there were a total of 80 learning disabilities classes operational in Montgomery County. Programs for young learning disabled children far exceed those for older learning disabled students; the ratio of elementary to secondary classes is more than two to one at the present time. Self-contained classroom programs predominate at both levels. The total number of students now being served in learning disabilities programs is 1,277 including 621 elementary aged students and 356 secondary aged students. The average class size was 11 at the primary grades and 14 in the secondary school. In addition to the youngsters being served in public school districts, districts have placed a total of 390 learning disabled students in private schools--221 elementary and 169 secondary placements.

It is interesting to note that the number of students attending private schools does not necessarily correspond to the size of the school age population, i.e., the larger the district the greater the number of students being sent to private schools.

In summary, the strategy employed for the Needs Assessment Survey involved the review of pupil records for a selected county-wide sample of sixth grade students for the purpose of identifying those children who might be learning disabled. Of the 905 children originally included in the survey sample, 814 were actually screened. One hundred and eighty six were identified as possible candidates for learning disabilities programs. Learning disabled candidates were those children whose level of academic achievement was far below a level commensurate with their ability, i.e., underachievers. Interestingly, the candidate's group also included children who represent the opposite picture, those whose performance counter indicates their reported low I.Q. scores, i.e., overachievers. Overachievers is, of course, a misnomer and the intellectual assessment is suspect for these children.

In order to differentiate between children who are truly learning disabled and meet all of the criteria for this classification and children whose school difficulties stem from a variety of other reasons, additional diagnostic testing would be required. The project did not have this prerogative. We anticipate that a substantial number of these learning disabled candidates would in fact be adjudged learning disabled as the result of further testing.

Results

The information derived in the needs assessment is presented in tabular form in the following section of the report. Each table is described and briefly discussed.

Table III presents a numerical overview of the sixth grade student sample. The sample schools within each district, the number of sixth grade students enrolled in the sample classes, the number of refusals and non-respondants, the actual number of children screened, the number of learning disabilities candidates, and the year of achievement testing are given. The specific schools noted for each district will, of course, correspond to the numerical distribution of classes outlined in Table I. The reader will note that discrepancies which occur between the number enrolled and the number of students actually screened were due to parental refusal of permission for inclusion in the survey, lack of parental response, or the absence of test data on transfer students. With regard to the testing information used, the last column in the table "year of achievement testing," indicates the time when the achievement tests were given in each of the districts. In no case were achievement scores below fifth grade included.

The number of tentative learning disabilities candidates identified within each class is also listed. In all, 186 learning disabilities cases were identified within the larger sample of 814 children. This number of learning disabled candidates represents 23 percent of the total survey (186÷814=23%). The portion of youngsters with significant achievement deficits is quite high.* We realize that the number of truly learning disabled, those who meet the criteria of process dysfunction, is less than this percentage would indicate. We anticipate, however, that the number identified by additional diagnosis will be substantial.

Table IV categorizes the learning disabled candidates by sex and area of educational deficiency. The number of male and female candidates within each district is presented, as well as the number of girls and boys having difficulty in math, reading, or both academic areas. For example, the entry for the Methacton School District indicates that there were 12 learning disabled candidates, seven males and five females. Among the males, four had difficulty in math while three students were having considerable difficulty in both math and reading. Among the girls, two were lagging significantly behind in reading, two lagged behind in math, and one student was having considerable difficulty in both subject areas. It was interesting to find that there was apparently no subject area by sex effect, i.e., students of one sex showing a greater proclivity for difficulty in one subject area than another. Reading was more likely to be the area of difficulty for both males and females. This finding is not at all unexpected, as reading problems are the most common disability in learning disabled children.

Table V classifies the learning disabled candidates at each school into one of four ability categories. Most of the children (127 of 186) fall within the 90 to 105 range, the second largest group falls within the 106 to 119 range (31 of 186). Twenty-five children fell below 90. Just three children in the gifted range were found to be significant underachievers. Youngsters whose intelligence quotients were 90 or above comprised 84 percent of the total L.D. candidates, while the percentage of children below 90 was 16 percent. It would appear that the screening procedure effectively excluded slow learning children.

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*We realize that the percentage of students identified as learning disability candidates is a function of our interpretation of a "significant" discrepancy. By increasing the stringency of the second criterion, i.e., two years or more of achievement lag rather than one or more years of achievement lag, we can reduce the number of learning disability candidates to 50 or 10.68 percent of the student sample. However, we chose the less stringent standard because we felt that it is better to initially include some students who would be screened out during the second phase of screening (direct diagnostic testing) rather than inadvertently exclude children who were truly learning disabled.

Table VI presents an individual listing of the 186 identified learning disabled candidates. The children are listed by identification numbers; in many cases their identities are not even known to the project staff. Sex, intelligence quotient, and area and degree of educational deficiency are given for each child. An entry of 1 under reading or math indicates that the child's performance was one to two years deficient; 2 represents a two to three year deficiency; 3 indicates three or more years of deficiency.

The children with intelligence quotients below 90 (the number corresponds to the ability distribution in Table V) are of great interest. In one instance, the reported intelligence quotient was 67. The reader will recall, however, that these children are included as learning disabled candidates because, despite the low I.Q., their actual performance on at least one achievement subtest was at or above grade expectancy for their group. Therefore, the reported ability quotients are questionable for many of these children and the data certainly warrant closer inspection. (Data for each of these children are given in Appendix B.)

On the other end of the continuum, there are three cases in which children whose intellectual ability falls within the gifted range (120 or better on a group administered intelligence test) but whose achievement was well below grade level. All three children were having difficulty in reading; one child was having difficulty in both math and reading. (Data for each of these children are given in Appendix C.)

Table VII indicates the percentage of students within each district serviced in learning disabilities programs during the 1974-75 school year. The percentages were derived by totaling the number of learning disabled in both private and public school programs and then dividing this number by the total student population. (Total number of learning disabled student ÷ total number of students = % of service for the learning disabled.) Separate percentages were derived for the elementary and secondary school populations.

In no instance did the percentage of learning disabled students enrolled in special programs at either the elementary or secondary level exceed 3 percent. Generally the percentage of service decreased from the elementary to the secondary schools. The reader will note that in some cases a zero % is entered in the table (4 for elementary programs and 8 for secondary programs); however, a zero does not mean that there was a total lack of identified students and/or services for them. Rather, in some cases the percentage was so small that it was not listed. In fact, only two districts have no programs at the elementary level and only one also has no program for the learning disabled at the secondary level.

Conclusions

The reader should bear in mind that the Needs Assessment Survey set forth in the preceding pages does not represent the results of an empirical investigation or sophisticated statistical data analysis. Rather, the survey represents only a systematic accumulation and compilation of descriptive information. Our methodology was necessarily subjective and arbitrarily determined since we could find no reported needs assessment studies or surveys at all in the area of secondary learning disabilities to guide us. However, the authors tried throughout to be logical and consistent in the selection and construction of our procedures and to present the findings in a clear and meaningful manner. Ultimately, this report will have to be judged in terms of its face validity, relevance, and usefulness to those professionals in the field involved in the development of programs for secondary learning disabled students.

In abbreviated form, the Needs Assessment Survey yielded the following results:

Number of sixth grade students screened for indications of learning disabilities.....814

Number of students tentatively identified as learning disability candidates.....186

Percentage of students tentatively identified as learning disability candidates..... 23

The reader is cautioned not to misconstrue the results to mean that 186 children or 23 percent of the survey sample are, in fact, learning disabled. This conclusion would be a gross misinterpretation without further and direct diagnostic testing to determine which, if any, of the children are truly handicapped by a learning disability. At present the youngsters have been identified only as underachievers. Pennsylvania state criteria for placement in learning disabilities programs require evidence of underlying process dysfunction in addition to underachievement. It is likely that additional diagnosis would reveal evidence of learning disability in some of the youngsters.

However, some conclusions which did emerge from the survey are:

1. across Montgomery County programs for young learning disabled students outnumber programs for learning disabled adolescents by a better than 2 to 1 ratio.

2. the percentage of children being serviced in programs for the learning disabled does not exceed 3 percent in any district for either elementary or secondary students.

3. underachievement (as defined in this report) among sixth grade children in Montgomery County public schools may be as high as 23 percent. Learning disabled students are a subsample of this larger group of underachieving, educationally handicapped youth.

4. the majority of children identified as underachievers/learning disabled candidates demonstrated intelligence quotients above 90; only a relatively small number of children whose intelligence quotients fell within the dull/normal range (80-90) and even fewer below 80 were identified as learning disabled candidates.

5. the primary area of academic difficulty for underachieving students, both male and female, was likely to be reading.

Some implications which can be drawn from the survey results are that:

1. The learning disability problem may increase, rather than decrease, in the higher grades. The number of secondary students who meet placement criteria and need special services is undoubtably greater than the number now being served and is very likely to substantially surpass the 3 percent figure so widely accepted in the field.

2. The disproportionate male to female student ratio which is so common in elementary classrooms may be, in part, an artifact of our screening/placement procedure and/or our own stereotype thinking.

3. In the absence of hard criteria, the identification of learning disabled adolescents will continue to vary widely from one district to another; clear and consistent criteria for diagnosis identification of learning disabled students is needed.

4. The learning disabled student and the dull/normal students are not the same; classes for the learning disabled should not become classes for slow learners.

5. The intellectual criteria of 90 or above now applied by the Intermediate Unit for admission to its classes for the learning disabled should be retained; however, some exceptions will have to be considered for students whose actual performance counter indicates a low intelligence quotient.

6. The current level of program development at the secondary level is probably insufficient to meet future needs.

TABLE I

Needs Assessment Survey: District Sixth Grade Classes Included in the Needs Assessment Sample

District	Total No. of 6th Grade Classes	District % of Total No. of Classes	No. of Sample Classes
Abington	20½	6%	2
Cheltenham	16½	5%	2
Colonial	24	7%	2
Hatboro-Horsham	13	4%	1
Jenkintown	3	1%	1
Lower Merion	28½	8%	3
Lower Moreland	12	3.5%	1
Methacton	13	4%	1
Norristown	26	7.5%	3
North Penn	36	9.5%	3
Perkiomen Valley	9	2.5%	1
Pottsgrove*	8	2.5%	1
Pottstown*	15	4.5%	2

Souderton	17	5%	2
Springfield	10	3%	1
Spring-Ford	13	4%	1
Upper Dublin	17	5%	2
Upper Merion	19	6%	2
Upper Moreland	17	5%	2
Upper Perkiomen	11	3%	1
Wissahickon	14	4.5%	2
TOTAL	342½		36 (10.4%)

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* Class units extrapolated from total numbers of students at sixth grade level.

TABLE II

Needs Assessment Survey: Number & Type of LD Programs in Montgomery County during the 1974-75 School Year

District	No. of Elementary LD Programs	No. of Elementary Ss Enrolled	No. of Secondary LD Programs	No. of Secondary Ss Enrolled	No. of LD Students Enrolled in Private Schools	
					Elementary	Secondary
Abington	1 I.U. S.C. 5 Dist. S.C.	10 50	1 I.U. S.C.	10	48	35
Cheltenham	1 I.U. R.R.	24	2 Dist. S.C.	20	0	13
Colonial	1 I.U. S.C. 2 Dist.1R.R. 1S.C.	11 27	2 Dist. R.R.	33	17	16
Hatboro-Horsham	3 I.U. 2 S.C. 1 R.R.	30	1 I.U. S.C.	12	4	2
Jenkintown					5	2
Lower Merion	1 I.U. R.R. 4 Dist. S.C.	21 49	1 Dist. S.C.	8	26	42
Lower Moreland	2 Dist. S.C.	20			16	2
Methacton	1 I.U. S.C. 3 Dist.2S.C. 1R.R.	10 42	1 I.U. S.C. 1 Dist.Elem./Sec. R.R.	16 17	0	1
Norristown	2 I.U. S.C.	20			34	6

North Penn	2 I.U. S.C. 1 Dist. S.C.	16 10	1 I.U. S.C. 3 Dist. S.C.	10 36	9	9
Perkiomen Valley	1 I.U. S.C.	10			6	2
Pottsgrove			1 I.U. S.C.	10		
Pottstown	1 I.U. S.C. 1 Dist. S.C.	10 12	1 I.U. S.C. Elem./Sec.	9	2	0
Souderton	1 I.U. S.C.	10	2 I.U. S.C.	24	5	3
Springfield	1 I.U. R.R. 2 Dist. S.C.	24 21	1 I.U. S.C. 2 Dist. R.R.	15 39	4	13
Spring-Ford					4	1
Upper Dublin	3 I.U. S.C.	28	1 I.U. S.C.	10	13	6
Upper Merion	1 I.U. S.C. 3 Dist. S.C.	10 33			23	4
Upper Moreland	4 Dist. S.C.	45	1 Dist. S.C.	12	0	2
Upper Perkiomen						
Wissahickon	3 I.U. S.C. 2 Dist. S.C.	29 23	1 I.U. S.C.	8	5	10

Ss - Students
Dist. - District operated class
I.U. - Intermediate Unit operated class
S.C. - Self-contained program
R.R. - Resource room program

TABLE II

Needs Assessment Survey: Number & Type of LD Programs in Montgomery County during the 1974-75 School Year

District	No. of Elementary LD Programs	No. of Elementary Ss Enrolled	No. of Secondary LD Programs	No. of Secondary Ss Enrolled	No. of LD Students Enrolled in Private Schools	
					Elementary	Secondary
Western Montgomery County Special Education Center	3 I.U. S.C.	26	1 I.U. S.C.	9		
St. Gabriel's Hall			1 I.U. S.C.	10		
	26 I.U.	289 I.U.	13 I.U.	143 I.U.		
	29 Dist.	332 Dist.	12 Dist.	213 Dist.		
TOTAL	55	621	25	356	221	169

Ss - Students
Dist. - District operated class
I.U. - Intermediate Unit operated class
S.C. - Self-contained program
R.R. - Resource room program

TABLE III

Needs Assessment Survey: Number of Sixth Graders Screened in Pre-selected Schools

District	School	No. of 6th Grade Students	No. of Refusals & Non-respondents	No. of Students Screened	No. of L.D. Candidates	Year of Achievement Testing
Abington	1) Glenside-Weldon Elementary	32	5	27	2	5th
	2) Highland Elementary	28	1	26*	4	6th
Cheltenham	1) Rowland Elementary	30	0	29*	5	5th
	2) Wyncote Elementary	25	1	24	2	5th
Colonial	1) Plymouth Elementary	26	1	25	1	6th
	2) Spring Mill Elementary	22	0	22	6	6th
Hatboro-Horsham	1) Loller Middle	29	3	21*	2	5th
Jenkintown	1) Jenkintown Elementary	24	0	23*	7	6th
Lower Merion	1) Gladwyne Elementary	22	0	21*	1	6th
	2) Bryn Mawr Elementary	19	0	16*	2	5th
	3) Merion Elementary	27	0	27	2	5th
Lower Moreland	1) Lower Moreland Intermediate	30	0	30	7	6th

Methacton	1) Arcola Intermediate	28	4	22*	12	5th
Norristown	1) Stewart Middle	27	5	21*	8	5th
	2) East Norriton Middle	23	10	13	2	5th
	3) Rittenhouse Middle	26	5	21	6	5th
North Penn	1) Oak Park Elementary	24	0	24	2	5th
	2) A. M. Kulp Elementary	20	0	18*	5	5th
	3) North Wales Elementary	18	0	17*	6	5th
Perkiomen Valley	1) Cope-Kulp Elementary	30	4	26	7	6th
Pottsgrove	1) Pottsgrove Intermediate	27	1	23*	6	5th
Pottstown	1) Pottstown Intermediate	60	0	59*	19	5th
Souderton	1) Franconia Elementary	26	0	26	9	6th
	2) West Broad Street Elementary	21	0	21	3	6th
Springfield	1) Enfield Elementary	23	2	21	9	5th
Spring-Ford	1) Oaks Elementary	26	4	22	8	6th
Upper Dublin	1) Sandy Run Elementary	23	5	18	2	6th
	2) Fort Washington Elementary	25	1	24	5	6th
Upper Merion	1) Candlebrook Elementary	18	3	15	4	6th
	2) Bridgeport Ford St. Elementary	25	0	25	6	6th

* Discrepancies due to absence of information for transfer students.

TABLE III

Needs Assessment Survey: Number of Sixth Graders Screened in Pre-selected Schools

District	School	No. of 6th Grade Students	No. of Refusals & Non-respondents	No. of Students Screened	No. of L.D. Candidates	Year of Achievement Testing
Upper Moreland	1) Cold Spring Elementary	25	0	25	3	6th
	2) North Willow Grove Elementary	22	0	22	1	6th
Upper Perkiomen	1) Upper Perkiomen Middle	25	5	19*	10	6th
Wissahickon	1) Blue Bell Elementary	26	4	22	5	6th
	2) Forest Avenue Elementary	22	3	19	7	6th
TOTAL		904	83	814	186	

* Discrepancies due to absence of information for transfer students.

TABLE IV

Needs Assessment Survey: Categorization of LD Candidates by Sex & Area of Educational Deficiency

District	No. of LD Candidates		Number of L.D. Candidates in Areas of Education Deficiency					
			Male			Female		
	Male	Female	Reading	Math	Math and Reading	Reading	Math	Math and Reading
Abington	5	1	3	1	1	1		
Cheltenham	3	4	1	1	1	4		
Colonial	3	4	3			4		
Hatboro-Horsham	1	1		1			1	
Jenkintown	4	3	1	1	2	2		1
Lower Merion	5		2	2	1			
Lower Moreland	4	3	1	1	2	1	1	1
Methacton	7	5		4	3	2	2	1
Norristown	7	9	2		5	5	2	2
North Penn	6	7	3	1	2	6	1	
Perkiomen Valley	5	2		3	2	1		1
Pottsgrove	4	2	3	1		1	1	

	Pottstown	11	8	3	3	5	1	5	2
	Souderton	8	4	4	2	2	2	1	1
	Springfield	4	5	1	1	2		3	2
	Spring-Ford	5	3	3	1	1	2	1	
	Upper Dublin	5	2	2		3	1	1	
	Upper Merion	4	6	3		1	4	2	
	Upper Moreland	2	2	1		1		2	
	Upper Perkiomen	7	3	2	2	3		2	1
	Wissahickon	5	7		2	3		4	3
29	TOTAL	105	81	38	27	40	37	29	15

TABLE V

Needs Assessment Survey: Number of LD Candidates in IQ Categories

District	School	89 and below*	90 to 105	106 to 119	120 and above
Abington	1) Glenside-Weldon Elementary			1	1
	2) Highland Elementary	1	2	1	
Cheltenham	1) Rowland Elementary	3	2		
	2) Wyncote Elementary		1	1	
Colonial	1) Plymouth Elementary	1			
	2) Spring Mill Elementary	3	3		
Hatboro-Horsham	1) Loller Middle		2		
Jenkintown	1) Jenkintown Elementary	1	4	1	1
Lower Merion	1) Gladwyne Elementary		1		
	2) Bryn Mawr Elementary		2		
	3) Merion Elementary		2		
Lower Moreland	1) Lower Moreland Intermediate		7		
Methacton	1) Arcola Intermediate	2	9	1	
Norristown	1) Stewart Middle		7	1	
	2) East Norriton Middle		2		
	3) Rittenhouse Middle		4	2	

North Penn	1) Oak Park Elementary		1	1	
	2) A. M. Kulp Elementary	1	4		
	3) North Wales Elementary	4	2		
Perkiomen Valley	1) Cope-Kulp Elementary		3	4	
Pottsgrove	1) Pottsgrove Intermediate		5	1	
Pottstown	1) Pottstown Intermediate	3	14	1	1
Souderton	1) Franconia Elementary	2	6	1	
	2) West Broad St. Elementary		3		
Springfield	1) Enfield Elementary		5	4	
Spring-Ford	1) Oaks Elementary		3	5	
Upper Dublin	1) Sandy Run Elementary		2		
	2) Fort Washington Elementary	2	2	1	
Upper Merion	1) Candlebrook Elementary		4		
	2) Bridgeport Ford St. Elementary	1	5		
Upper Moreland	1) Cold Spring Elementary		3		
	2) North Willow Grove Elementary		1		

*For specific tests used see Appendix

TABLE V

Needs Assessment Survey: Number of LD Candidates in IQ Categories

District		School	89 and below	90 to 105	106 to 119	120 and above
Upper Perkiomen	1)	Upper Perkiomen Middle	1	8	1	
Wissahickon	1)	Blue Bell Elementary		3	2	
	2)	Forest Avenue Elementary		5	2	
TOTAL			25	127	31	3

TABLE VI

Needs Assessment Survey: Area & Degree of Educational Deficiency for each LD Candidate

District	LD Candidates	Sex	IQ	Area & Degree of Educational Deficiency* Reading **	Math
Abington	# 1	M	113	1	
	# 2	M	126	1	
	# 3	M	95	1	
	# 4	F	85	1	1
	# 5	M	91	2	1
	# 6	M	113		1
Cheltenham	# 7	F	74	1	
	# 8	F	103	1	
	# 9	M	67	1	1
	# 10	F	71	1	
	# 11	M	99	1	
	# 12	M	98		1
	# 13	F	109	1	
Colonial	# 14	F	85	1	
	# 15	M	92	1	
	# 16	F	96	1	
	# 17	F	77	1	
	# 18	M	89	1	
	# 19	F	83	1	
	# 20	M	96	1	
Hatboro-Horsham	# 21	F	95		1
	# 22	M	98		1

Jenkintown	# 23	M	98	1	1
	# 24	M	121	1	
	# 25	F	98	1	2
	# 26	M	103	1	1
	# 27	F	86	1	
	# 28	M	99		1
	# 29	F	119	1	
Lower Merion	# 30	M	102	1	1
	# 31	M	96		1
	# 32	M	100	1	
	# 33	M	95	1	
	# 34	M	92		1
Lower Moreland	# 35	F	100		2
	# 36	M	90	2	
	# 37	M	105	2	2
	# 38	M	100	2	1
	# 39	M	101		1
	# 40	F	102	1	
	# 41	F	98	1	
Methacton	# 42	M	104		1
	# 43	M	101	1	1
	# 44	M	89		1
	# 45	F	92	1	
	# 46	M	91		1
	# 47	F	94	1	
	# 48	F	95		1
	# 49	M	85	1	1

*1 = 1-2 year deficiency
2 = 2-3 year deficiency
3 = 3 or more years deficiency

** For specific tests used see Appendix

TABLE VI

Needs Assessment Survey: Area & Degree of Educational Deficiency for each LD Candidate

District	LD Candidates	Sex	IQ	Area & Degree of Educational Deficiency* Reading	Math
	# 50	M	98		1
	# 51	M	93	2	2
	# 52	F	99	1	1
	# 53	F	108		2
Norristown	# 54	M	103	1	1
	# 55	F	100	3	2
	# 56	F	99	1	
	# 57	F	100	1	
	# 58	F	98	2	1
	# 59	M	91	1	
	# 60	F	108	1	
	# 61	M	96	2	1
	# 62	M	98	1	1
	# 63	F	100		1
	# 64	F	110	1	
	# 65	M	102	2	1
	# 66	F	99	1	
	# 67	M	98	2	1
	# 68	F	112		2
	# 69	M	93	2	
North Penn	# 70	M	97	3	2
	# 71	M	108	1	
	# 72	F	86	1	
	# 73	F	91	2	

	# 74	F	97	2	
	# 75	F	96	1	
	# 76	M	97	1	
	# 77	F	87	1	
	# 78	F	92		1
	# 79	M	68	2	
	# 80	M	80	2	1
	# 81	F	95	1	
	# 82	M	87		1
Perkiomen Valley	# 83	M	111		1
	# 84	F	115	1	
	# 85	M	96	1	1
	# 86	M	116		1
	# 87	F	111	1	2
	# 88	M	101		1
	# 89	M	91	2	1
Pottsgrove	# 90	M	95	2	
	# 91	F	98		1
	# 92	M	91	1	
	# 93	M	108		1
	# 94	F	98	1	
	# 95	M	90	1	
Pottstown	# 96	M	101	1	
	# 97	M	101		1
	# 98	F	85	1	2
	# 99	M	85	1	1
	#100	F	99	1	1
	#101	M	99	1	
	#102	M	87	1	
	#103	F	109		1

*1 = 1-2 year deficiency
2 = 2-3 year deficiency
3 = 3 or more years deficiency

TABLE VI

Needs Assessment Survey: Area & Degree of Educational Deficiency for each LD Candidate

District	LD Candidates	Sex	IQ	Area & Degree of Educational Deficiency* Reading	Math
	#104	M	126	1	1
	#105	M	98		1
	#106	M	94		1
	#107	F	98		2
	#108	F	105		2
	#109	F	101		1
	#110	M	91	2	2
	#111	M	99	1	2
	#112	F	97	2	
	#113	M	96	1	2
	#114	F	102		1
Souderton	#115	M	98	3	
	#116	M	113		1
	#117	M	88	1	
	#118	M	94	3	
	#119	F	92	1	2
	#120	M	102	1	1
	#121	F	88	1	
	#122	F	105	1	
	#123	M	104	1	1
	#124	M	104	1	
	#125	F	102		1
	#126	M	100		1

Springfield	#127	M	116	1	
	#128	F	106		1
	#129	M	111	1	1
	#130	F	105	1	1
	#131	M	94		1
	#132	F	101		1
	#133	F	103	1	2
	#134	F	92		1
	#135	M	114	1	1
Spring-Ford	#136	M	111	1	
	#137	M	113	1	1
	#138	M	118		2
	#139	M	97	1	
	#140	F	108		1
	#141	F	96	1	
	#142	F	109	1	
	#143	M	103	1	
Upper Dublin	#144	M	87	1	1
	#145	M	76	2	2
	#146	M	99	1	
	#147	F	100		1
	#148	F	109	1	
	#149	M	101	2	
	#150	M	95	2	1
Upper Merion	#151	M	90	1	
	#152	F	96		1
	#153	F	91	1	
	#154	F	95		1

*1 = 1-2 year deficiency
2 = 2-3 year deficiency
3 = 3 or more years deficiency

TABLE VI

Needs Assessment Survey: Area & Degree of Educational Deficiency for each LD Candidate

District	LD Candidates	Sex	IQ	Area & Degree of Educational Deficiency* Reading	Math
	#155	F	94	1	
	#156	F	87	1	
	#157	M	90	2	2
	#158	M	94	3	
	#159	F	91	1	
	#160	M	94	1	
Upper Moreland	#161	M	90	1	
	#162	F	93		2
	#163	F	97		1
	#164	M	95	1	2
Upper Perkiomen	#165	M	99	3	2
	#166	F	101	1	2
	#167	F	103		1
	#168	M	99	2	
	#169	F	101		1
	#170	M	104		1
	#171	M	101	1	2
	#172	M	94	1	
	#173	M	89		1
	#174	M	107	2	1
Wissahickon	#175	M	96		1
	#176	F	116	1	1

#177	F	105		1
#178	F	108		1
#179	F	101		1
#180	F	98		1
#181	F	111	2	2
#182	M	107	1	1
#183	F	96	1	2
#184	M	94	3	1
#185	M	91	1	1
#186	M	91		1

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*1 = 1-2 year deficiency
2 = 2-3 year deficiency
3 = 3 or more years deficiency

TABLE VII

Needs Assessment Survey: Percentage of the Elementary and Secondary School Student Population Being Served in Learning Disabilities Programs

District	Total Elem. Population	Number of Elementary LD Students		% of Ss Being Serviced in Elem. LD Programs	Total Sec. Population	Number of Secondary LD Students		% of Ss Being Serviced in Sec. LD Programs
		Public	Private			Public	Private	
Abington	4,983	60	48	3%	5,823	10	35	1%
Cheltenham	2,457	24	0	1%	3,362	20	13	1%
Colonial	3,608	38	17	2%	4,073	33	16	1%
Hatboro-Horsham	2,416	30	4	1%	2,394	12	2	1%
Jenkintown	328	0	5	0	477	0	2	0
Lower Merion	4,385	70	26	2%	4,516	8	42	1%
Lower Moreland	1,583	20	16	2%	1,579	0	2	0
Methacton	2,701	52	0	2%	2,556	33	1	1%
Norristown	5,081	20	34	1%	4,437	0	6	0
North Penn	5,840	36	9	1%	5,314	46	9	1%
Perkiomen Valley	1,508	10	6	1%	1,598	0	2	0
Pottsgrove	1,445	0	0	0	1,290	10	0	1%

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	Pottstown	2,425	22	2	1%	2,056	9	0	0
	Souderton	3,045	10	5	0	2,746	24	3	1%
	Springfield	1,520	45	4	3%	2,133	54	13	3%
	Spring-Ford	2,180	7	4	1%	2,239	8	1	0
	Upper Dublin	2,402	28	13	2%	2,822	10	6	1%
	Upper Merion	2,949	43	23	2%	3,290	0	4	0
	Upper Moreland	2,557	43	0	2%	2,714	13	2	1%
	Upper Perkiomen	1,731	0	0	0	1,526	0	0	0
43	Wissahickon	2,227	52	5	3%	2,434	8	10	1%

APPENDIX A

Intelligence & Achievement Measures Utilized in District Testing Programs

District	Group Aptitude Test Given	Group Achievement Test Given
Abington	California Test of Mental Maturity	Comprehensive Test of Basic Skills
Cheltenham	Otis Lenin Mental Aptitude Test	Stanford Achievement Test
Colonial	Short-Form Test of Academic Aptitude	Comprehensive Test of Basic Studies
Hatboro-Horsham	Otis Lenin Mental Aptitude Test	Stanford Achievement Test
Jenkintown	Otis Lenin Mental Aptitude Test	Stanford Achievement Test
Lower Merion	Otis Lenin Mental Aptitude Test	Metropolitan Achievement Test
Lower Moreland	Lorge-Thorndike Intelligence Test	Metropolitan Achievement Test
Methacton	Otis Lenin Mental Aptitude Test	Stanford Achievement Test
Norristown	Otis Lenin Mental Aptitude Test	Comprehensive Test of Basic Skills
North Penn	Otis Lenin Mental Aptitude Test	Comprehensive Test of Basic Skills
Perkiomen Valley	Primary Mental Abilities Test	SRA Assessment Survey Achievement Test
Pottsgrove	Otis Lenin Mental Aptitude Test	Iowa Test of Basic Skills
Pottstown	Otis Lenin Mental Aptitude Test	Iowa Test of Basic Skills
Souderton	Otis Lenin Mental Aptitude Test	Stanford Achievement Test

Springfield	Kuhlman-Anderson Aptitude Test	Stanford Achievement Test
Spring-Ford	California Test of Mental Maturity	SRA Assessment Survey Achievement Test
Upper Dublin	Cognitive Abilities Test	Iowa Test of Basic Skills
Upper Merion	Analysis of Learning Potential	Stanford Achievement Test
Upper Moreland	Otis Lenin Mental Abilities Test	Stanford Achievement Test
Upper Perkiomen	Otis Lenin Mental Abilities Test	Stanford Achievement Test
Wissahickon	Otis Lenin Mental Abilities Test	Metropolitan Achievement Test

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APPENDIX B

Test Data for Students with Intelligence Quotients Below 90

Student Identification Number	Intelligence Quotient	Group Achievement Test Given	Expected Grade Level Performance (Grade Equivalent)	Total Reading Score
#4	85	California Test of Basic Skills	6.1	4.7
#7	74	Stanford Achievement Test	5.5	4.3
#9	67	Stanford Achievement Test	5.5	4.3
#10	71	Stanford Achievement Test	5.5	3.9
#14	85	California Test of Basic Skills	6.2	4.4
#17	77	California Test of Basic Skills	6.2	5.0
#18	89	California Test of Basic Skills	6.2	4.5
#19	83	California Test of Basic Skills	6.2	4.9

Total Math Score	Sub-test Scores		
4.6	Vocabulary=4.7	Reading Comprehension=4.7	Applications=4.4
	Mechanics =6.5	Expression =4.4	Graphs =5.9
	Spelling =6.9	Math Concepts =4.5	
	References=7.5	Computations =4.7	
4.6	Vocabulary=3.0	Reading Comprehension=3.6	Applications=3.6
	Word Study=4.9	Math Concepts =4.7	Language =4.5
	Spelling =4.4	Computations =5.4	
3.9	Vocabulary=7.3	Reading Comprehension=3.9	Applications=4.4
	Word Study=4.5	Math Concepts =3.7	Language =5.1
	Spelling =3.9	Computations =3.2	
4.9	Vocabulary=6.0	Reading Comprehension=3.8	Applications=4.0
	Word Study=4.0	Math Concepts =5.2	Language =4.8
	Spelling =4.2	Computations =5.5	
5.5	Vocabulary=4.8	Reading Comprehension=4.2	Applications=6.1
	Mechanics =4.5	Expression =5.0	Science =3.3
	Spelling =5.4	Math Concepts =4.2	
	References=4.9	Computations =6.7	
5.9	Vocabulary=4.9	Reading Comprehension=4.9	Applications=5.2
	Mechanics =3.8	Expression =4.0	Science =4.0
	Spelling =6.8	Math Concepts =4.2	
	References=4.8	Computations =7.3	
6.0	Vocabulary=4.2	Reading Comprehension=4.9	Applications=7.6
	Mechanics =4.2	Expression =4.3	Science =4.3
	Spelling =2.1	Math Concepts =6.1	
	References=5.8	Computations =5.3	
5.4	Vocabulary=4.7	Reading Comprehension=4.9	Applications=4.9
	Mechanics =5.7	Expression =6.5	Science =4.7
	Spelling =5.1	Math Concepts =6.1	
	References=4.4	Computations =5.3	

APPENDIX B

Test Data for Students with Intelligence Quotients Below 90

Student Identification Number	Intelligence Quotient	Group Achievement Test Given	Expected Grade Level Performance (Grade Equivalent)	Total Reading Score
#27	86	Stanford Achievement Test	6.1	4.9
#44	89	Stanford Achievement Test	5.7	5.0
#49	85	Stanford Achievement Test	5.7	4.1
#72	86	California Test of Basic Skills	5.8	4.8
#77	87	California Test of Basic Skills	5.7	4.5
#79	68	California Test of Basic Skills	5.7	3.0
#80	80	California Test of Basic Skills	5.7	2.9

Total Math Score	Sub-test Scores		
6.2	Word Study=6.2	Listening Comprehension=3.0	Applications=5.4
	Spelling =6.0	Reading Comprehension =4.9	Computations=4.1
	Science =5.4	Social Science =4.4	
	Language =4.5	Math Concepts =5.9	
3.8	Spelling=5.1	Paragraph Meaning=4.7	Applications=3.1
	Language=3.6	Social Studies =6.2	Computations=2.9
	Science =5.8	Math Concepts =5.4	Word Meaning=5.4
4.6	Spelling=4.8	Paragraph Meaning=3.4	Applications=4.4
	Language=3.3	Social Studies =5.5	Computations=5.2
	Science =6.7	Math Concepts =4.3	Word Meaning=4.4
6.3	Vocabulary=4.2	Reading Comprehension=5.3	Applications=6.1
	Mechanics =3.1	Expression =5.0	Science =4.0
	Spelling =7.3	Math Concepts =6.1	
	References=5.3	Computations =6.7	
6.0	Vocabulary=4.2	Reading Comprehension=4.9	Applications=4.9
	Mechanics =5.7	Expression =4.0	Science =6.3
	Spelling =5.1	Math Concepts =4.2	
	References=5.3	Computations =8.1	
6.0	Vocabulary=3.4	Reading Comprehension=2.6	Applications=4.9
	Mechanics =2.7	Expression =2.4	Science =4.0
	Spelling =2.6	Math Concepts =6.6	
	References=2.9	Computations =6.5	
4.6	Vocabulary=2.9	Reading Comprehension=2.8	Applications=4.6
	Mechanics =3.1	Expression =3.0	Science =4.0
	Spelling =3.3	Math Concepts =6.1	
	References=2.2	Computations =3.9	

APPENDIX B

Test Data for Students with Intelligence Quotients Below 90

Student Identification Number	Intelligence Quotient	Group Achievement Test Given	Expected Grade Level Performance (Grade Equivalent)	Total Reading Score
#82	87	California Test of Basic Skills	5.7	5.6
#98	85	Iowa Test of Basic Skills	5.3	4.3
#99	85	Iowa Test of Basic Skills	5.3	3.8
#102	87	Iowa Test of Basic Skills	5.3	3.5
#117	88	Stanford Achievement Test	6.3	5.2
#121	88	Stanford Achievement Test	6.3	4.4
#144	87	Iowa Test of Basic Skills	6.5	4.7
#145	76	Iowa Test of Basic Skills	6.5	4.1

Total Math Score	Sub-test Scores		
3.7	Vocabulary=5.6	Reading Comprehension=5.4	Applications=4.6
	Mechanics =3.4	Expression =9.6	Science =6.3
	Spelling =3.5	Math Concepts =3.1	
	References=6.6	Computations =3.6	
3.0	Vocabulary=4.6	Math Concepts=3.1	Graphs=4.6
	Spelling =5.3	Punctuation =4.8	Usage =4.9
	References=3.7	Problems =3.0	Maps =4.8
4.2	Vocabulary=3.0	Math Concepts=5.3	Graphs=4.7
	Spelling =2.3	Punctuation =3.8	Usage =3.9
	References=4.7	Problems =3.2	Maps =4.7
4.4	Vocabulary=4.0	Math Concepts=4.5	Graphs=4.9
	Spelling =5.5	Punctuation =4.6	Usage =3.2
	References=4.3	Problems =4.2	Maps =4.7
5.4	Word Study=3.0	Listening Comprehension=7.3	Applications=6.2
	Spelling =6.3	Reading Comprehension =7.1	Computations=5.5
	Science =7.0	Social Science =6.2	
	Language =4.3	Math Concepts =3.7	
5.5	Word Study=3.0	Listening Comprehension=6.5	Applications=5.6
	Spelling =4.9	Reading Comprehension =5.4	Computations=5.9
	Science =6.3	Social Science =5.9	
	Language =3.0	Math Concepts =4.2	
4.8	Vocabulary=6.1	Capitalization=5.8	Graphs=3.7
	Spelling =3.8	Math Concepts =5.5	Maps =6.5
	Problems =4.1	Punctuation =6.4	
	References=4.8	Usage =4.6	
5.2	Vocabulary=5.0	Capitalization=5.6	Graphs=4.0
	Spelling =3.4	Math Concepts =4.8	Maps =4.9
	Problems =5.6	Punctuation =7.0	
	References=6.4	Usage =4.2	

APPENDIX B

Test Data for Students with Intelligence Quotients Below 90

Student Identification Number	Intelligence Quotient	Group Achievement Test Given	Expected Grade Level Performance (Grade Equivalent)	Total Reading Score
#156	87	Stanford Achievement Test	6.2	5.2
#173	89	Stanford Achievement Test	6.3	6.6

Total Math Scores	Sub-test Scores		
6.2	Word Study=4.1	Listening Comprehension=5.9	Applications=7.2
	Spelling =4.3	Reading Comprehension =6.3	Computations=5.2
	Science =5.8	Social Science =5.9	
	Language =3.0	Math Concepts =6.2	
5.0	Vocabulary=5.4	Reading Comprehension=7.3	Applications=5.8
	Spelling =4.3	Word Study Skills =5.5	Computations=3.9
	Science =4.1	Social Science =4.9	
	Language =3.0	Math Concepts =5.2	

APPENDIX C

Test Data for Students with Intelligence Quotients of 120 or Above

Student Identification Number	Intelligence Quotient	Group Achievement Test Given	Expected Grade Level Performance (Grade Equivalent)	Total Reading Score
# 2	126	California Test of Basic Skills	5.1	4.0
#29	121	Stanford Achievement Test	6.1	5.1
#124	126	Iowa Test of Basic Skills	5.3	3.5

Total Math Score	Sub-test Scores		
4.9	Vocabulary=5.0	Reading Comprehension=3.1	Applications=5.3
	Mechanics =4.4	Expression =4.0	Graphs =5.4
	Spelling =4.1	Math Concepts =5.1	
	References=1.9	Computations =4.7	
5.4	Vocabulary=8.5	Listening Comprehension=6.2	Applications=5.6
	Word Study=4.5	Reading Comprehension =5.7	Computations=4.5
	Spelling =4.6	Social Science =6.4	Science =6.8
	Language =5.6	Math Concepts =5.9	
3.6	Vocabulary=3.4	Punctuation =5.3	Graphs=3.2
	Spelling =4.1	Problems =3.8	Usage =2.0
	References=3.6	Math Concepts=3.3	Maps =4.5